

Work Order ID 124047

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124047

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Item ID: D2741 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Blade
Start Date: 9/08/14 Start Qty: 20.00 ***20*** Cust Item ID:
Required Date: 9/19/14 Req'd Qty: 20.00 ***20*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Outsource process - Heat Treat	0.00							
160									
Outsource1	Memo	0.00							
Outsource process - Heat Treat	Issue P/O: <u>25995</u>								
	Harden material as per Dwg D2741								
	Min. Ultimate Tensile Strength = 152 ksi (34-40 HRC)								
	Min. Yield Tensile Strength = 141 ksi								
	Test report or Certification required								
	Sand blast parts								
170	Receive & Inspect for Damage & Mat'l Certs	0.00							
170									
Packaging	Memo	0.00							
Packaging	Ensure Test report or Certification attached								

CL14/10/02 17Mx SP14-10-27

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 Item Name: Blade
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	QC3- Inspect Part Finish	0.00				(17)			DAS 38 9-89
210									
QC	Memo	0.00							
Quality Control									NOV 11 2014
220	Identify as per dwg & Stock Location. <u>S338</u>	0.00				17			DAS 96 9-89
220									NOV 11 2014
Packaging	Memo	0.00							
Packaging									
230	QC21- Final Inspection - Work Order Release	0.00							
230									14/11/12
QC	Memo	0.00							
Quality Control									

AA 4-11-12

Picklist Print

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Work Order ID: 124047

124047

Parent Item: D2741

D2741

Parent Item Name: Blade

Start Date: 9/08/14

Required Date: 9/19/14

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP Rev: D00.11.15Removed P/O turning - in house processEC
IPP Rev: E 06-03-20 As Per Rev C JLM
IPP Rev: F 06.04.20Added grinding after heat treating EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NB0.500X03.00 0		Purchased	No			100	f	19.8300	1.1541	25			

M4130NB0 500X03 000

**

4130 Bar 0.500 x 3.00

Location

Loc Qty

Loc Code

MAT034

19.83

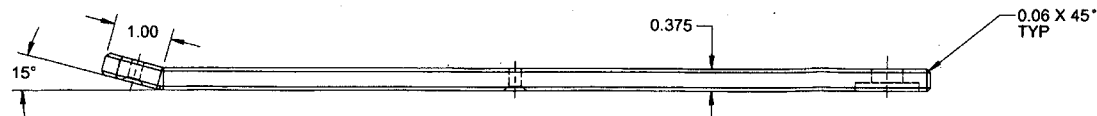
m129618

19.83

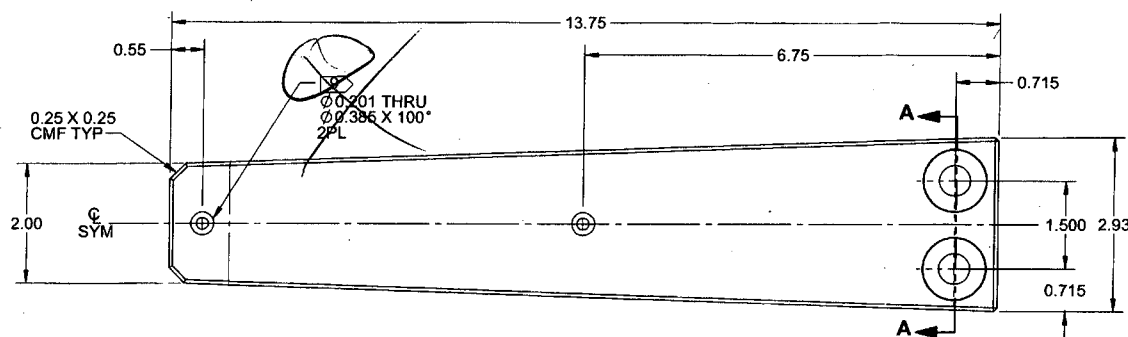
(17)

~~17~~

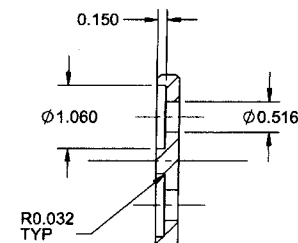
19/09/12



D2741 BLADE
(MAKE FROM D2741F)



D2741F FLAT PATTERN



SECTION A-A

RELEASED
2014-04-04

NOTES:

- 1) MATERIAL: AISI 4130N STEEL BAR PER MIL-S-6758 OR AMS 6345/6348/6370/6528
REF DART SPEC. M4130N-B0.500X3.000
- 2) FINISH: D2741: POWDER COAT "WHITE" (4.3.5.2) PER DART QSI 005 4.3
D2741-NP: NO PAINT
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.030 TO 0.060 MAX
- 6) IDENTIFICATION: WITH DART P/N "D2741" OR D2741-NP, AND B/N "BXXXXX", PER DART QSI 044 6.1 (FINE POINT PAINT MARKER)
- 7) WEIGHT: 3.3 lbs
- 8) HEAT TREAT TO MIN. ULTIMATE TENSILE STRENGTH = 152 ksi AND MIN. YIELD TENSILE STRENGTH = 141 ksi
PER MIL-S-6758 OR AMS2759/1E AFTER MACHINING.
ACCEPTABLE TO VERIFY TENSILE STRENGTH BY HARDNESS TEST PER ASTM E18 TO 34-40 HRC.
- 9) OPTIONAL: ONLY REQUIRED WHEN MAKING D350-636-215/-216/-217/-218, NOT APPLICABLE ON D2741-NP.

REV.	DESCRIPTION	BY	DATE
E	ADD D2741-NP (NO PAINT) OPTION (ZN AB-1)	DB	13.08.29
D	ADD Ø0.201 HOLES AND NOTE 10 (ZN D7-1) REMOVE -041/043 OPTIONS REFORMAT DWG. REF PAR11-72	SFM	13.02.21
C	LARGER HOLE, ADD RADIUS AND CHAMFER ADD -041/-043 OPTIONS	PH	06.01.12
B	CHANGE C'SINK TO C'BORE	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
DESIGN	DS	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	DB		
CHECKED	P.P.	DRAWING NO.	REV. E
MFG. APPR.	AS	D2741	SHEET 1 OF 1
APPROVED	WJ	TITLE	SCALE
DE APPR.	WJ	BLADE	NTS
DATE	13.08.29	COPYRIGHT © 1988 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR TRANSMITTED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO25995**

Purchase Order Date 10/2/2014

PO Print Date 10/2/2014

Page Number 1 of 2

Order From :

VC-MET004

METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA



Contact Name

Vendor Phone 450 473 1884

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Ship To Contact

Ship To Phone

Ship Via:

TST Overland

Ship Acct:

Line Nbr	Reference Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	CD	Req Qty/ Unit of Measure	PO Unit Price	Extend. Pri
Line Comments			Promise Date				
Delivery Comments							

1	124048	D2741 BLADE	10/17/2014		47.00	\$0.00	\$0.00
			Yes				
			10/17/2014				

HARDEN MATERIAL:
ULTIMATE TENSILE STRENGTH = 152 KSI
MINIMUM YIELD TENSILE STENGHT = 141 KSI
(34-40 HRC)
SAND BLAST PART AFTER HEAT TREAT
NOTE: DETAIL C OF C REQUIRED

NOTE: DO NOT MIXED BATCHES

Line Total: \$0.00

2	124047	D2740 BLADE	10/17/2014		17.00	\$0.00	\$0.00
			Yes				
			10/17/2014				

HARDEN MATERIAL:
ULTIMATE TENSILE STRENGTH = 152 KSI
MINIMUM YIELD TENSILE STENGHT = 141 KSI
(34-40 HRC)
SAND BLAST PART AFTER HEAT TREAT
NOTE: DETAIL C OF C REQUIRED

NOTE: DO NOT MIXED BATCHES

Note:

10/2/2014

METCOR INC.

560 BOUL ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDIT Shipper
199343	1	85459

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT / Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

LIVRÉ À / Shipped To

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
25995		4130	2014/10/3	tst
QUANTITÉ Quantity	No. PIÈCE Part No.	NOM DE LA PIÈCE Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight

64 D2741 ✓

BLADE

(47) D2741 BLADE
ORDER 124048

(17) D2740

ORDER 124047

1 PAL= 5 BC

222.12

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
	1	1pal=5bc

CERTIFICAT

EMPAQUETAGE Packing	
------------------------	--

QUANTITÉ EXPÉDIÉE / Quantity Shipped 64

POIDS EXPÉDIÉ / Weight Shipped 222.12

QUANTITÉ RESTANTE / Quantity Remaining 0

POIDS RESTANT / Weight Remaining 0.00

CERTIFICAT

QUANTITÉ EXPÉDIÉE / Quantity Shipped 64

POIDS EXPÉDIÉ / Weight Shipped 222.12

Signature:

Date:

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Rapport d'Inspection**Inspection Report**

BON DE TRAVAIL order	CHARGEMENT load
199343	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

COMMANDE DU CLIENT customer po	BON DE LIVRAISON DU CLIENT customer shipper no.	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
25995		4130		

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

SEL HARDEN

HARDEN AND TEMPER

SAE AMS 2758/1 REV.E

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	34 - 40 HRC	64	37 - 38 HRC
TENSILE (KSI)	152 - 182 KSI		166 - 171 KSI

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
64	222.12	D2741 BLADE (47) D2741 BLADE ORDER. 124048 (17) D2740 ORDER. 124047 1 PAL= 5 BC

COMMENTAIRES / comments

17/10/2014

APPROUVÉ par / Approved by:

METCOR
11

DATE: 2014-10-21

POUR APPROBATION

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détail

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGE load
199343	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	BON DE LIVRAISON DU CLIENT customer shipper no.	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
25995		4130		

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

SEL HARDEN

HARDEN AND TEMPER

SAE AMS 2759/1 REV.E

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	34 - 40 HRC	64	37 - 38 HRC
TENSILE (KSI)	152 - 182 KSI		166 - 171 KSI
Tensile values converted from Hardness			

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
64	222.12	D2741 BLADE (47) D2741 BLADE ORDER. 124048 (17) D2740 ORDER. 124047 1 PAL-5 BC

COMMENTAIRES / comments

SALT HARDEN 1575F, 40 MIN
TEMPER 875F. 4 HRS

Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec AMS2759. Le TT a été fait tel que requis par AMS2759 et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec AMS2759 et le bon de commande et le matériel rencontre les exigences spécifiées.

Heat treatment (HT) was performed with equipment that meets the requirements of AMS2759. All HT operations were in compliance with AMS2759 and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with AMS2759 and the purchase order and was found to meet the requirements.

Isabel Otero

Isabel Otero
QA Technician



OCT 22 2014

